

## **Advances of multi kHz repetition rate picosecond laser system for satellite laser ranging**

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### **Abstract**

*Saturable absorber mode locked and diode pumped picosecond laser systems at a repetition rate of 2 kHz have been successfully introduced for SLR (by the Graz station) in previous years. These systems were based on the laser material Nd:Vanadate. A better candidate to reach higher pulse energies is the laser material due to its higher laser state life time. Here we present a new Nd:YLF laser system delivering 1.2mJ at 1 kHz and 0.6mJ at 2 kHz. The system exhibits a simpler set-up and can run up to higher repetition rates.*